Kentucky
Epidemiologic Notes & Reports

CABINET FOR HEALTH SERVICES
DEPARTMENT FOR PUBLIC HEALTH
DIVISION OF EPIDEMIOLOGY
& HEALTH PLANNING

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Public Health Service Celebrates 200th Birthday

Submitted by: Commissioner for Public Health, Rice C. Leach, MD, Captain (Ret.), USPHS

In 1788, the first U.S. Congress appointed a committee to look into ways to provide medical care for this country's merchant seamen. It took 10 years for Congress to pass a bill, but in July 1798, President John Adams signed legislation that established a system of medical care for seamen. With a monthly deduction from their wages, active merchant seamen were assured of access to medical care in United States ports. The United States Public Health Services (USPHS) traces its beginnings to that act.

The first hospital was organized in Boston, and many others followed, including one in Louisville that was housed in the building currently occupied by Family Health Centers on Portland Avenue. (The white brick building behind the clinic was a hospital during the Civil War). In its early years, the USPHS focused on medical care for merchant seamen and the control of communicable diseases associated with international trade. By the mid-1800s, the country recognized the need for a national organization to address public health issues and established a National Board of Health. One of its members was Dr. Samuel Merrifield Bemiss, originally of Nelson County, who had taught pathology at the University of Louisville before moving to Louisiana.

The scientific developments of the late 19th century established the need for a laboratory service. The USPHS responded by setting aside laboratory space in the Staten Island (New York) Hospital. This laboratory later moved to Washington, D.C. and grew over the years to become the National Institutes of Health. Malaria control efforts along the Gulf Coast during World War II led to the 1947 establishment of the Centers for Disease Control and Prevention (CDC). Increasing knowledge of occupational risks for disease led to the founding of the National Institute for Occupational Health. This agency, attached to CDC, has 2 of its principal units in Cincinnati. The high prevalence of tuberculosis among American Indians inducted into military service during World War II led to the creation of the Indian Health Service in 1955. Early in this decade, concern about the quality and the appropriateness of medical care led to the development of the Agency for Health Care Policy and Research.

Today's public health service contains the following agencies: The Centers for Disease Control and Prevention (CDC), the Agency for Toxic Substances and Disease Registry (ASTDR), the Indian Health Service (IHS), the Health Resources and Services Administration (HRSA), the Food and Drug Administration (FDA), the Substance Abuse and Mental Health Administration (SAMSA), the National Institutes of Health (NIH), and the Agency for Health Care Policy and Research (AHCPR).

The Commonwealth has benefited in many ways from

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the agency's expertise and involvement over the years. In southeastern Kentucky, the incidence of trachoma and hookworm has been reduced, in part, as a result of formal USPHS studies performed in the first half of the 20th century. The Public Health Service established the "Narcotics Hospital" on Leestown Pike in Lexington and ran it until it was transferred to the U.S. Department of Justice in the 1970's. Many of the professional staff currently administering the medical facility at the Lexington Federal Correctional Institution (the former "Narcotics Hospital") are USPHS active duty officers. Last year, Public Health Service officers responded to our flood emergency by assisting state and other federal agencies. Numerous grants and contracts from HRSA, NIH, and CDC support our AIDS, cancer, and communicable disease programs. Dozens of federal employees have been assigned to Kentucky over the years to work side by side with our state and local public health staff. Kentucky has benefited also by the prompt responses from these agencies each time we have requested information, consultation, or on-site visits to help with assessment and intervention of complex health problems.

The USPHS continues to contribute to our well being by providing first class professionals for the Department of Public Health. Dr. Glyn Caldwell, the new director of the Division of Epidemiology and Planning, is a retired officer of the Public Health Service, and Dr. Stephen Wyatt, who joins our team this summer, is an active duty officer of the USPHS.

Hepatitis B Screening Required for Pregnant Women

Legislation enacted by the 1998 General Assembly mandates that health care providers shall test all pregnant women for the presence of hepatitis B surface antigen (HBsAg). The measure becomes effective July 15 of this year. The goals of prenatal testing are to identify: a) those infants at high risk of becoming infected with hepatitis B so that they will receive the appropriate immunizations at birth, and b) household contacts and sex partners who should be vaccinated. Infants who are infected through perinatal transmission have a 90% risk of chronic infection with the hepatitis B virus (HBV) and, as adults, up to 25% will die of liver disease. [1]

Hepatitis B Screening Required for Pregnant Women Effective July 15, 1998

If a pregnant woman is known to be infected, the delivering hospital will be prepared to administer to her child the recommended immunoprophylaxis of hepatitis B immune globulin (HBIG) and hepatitis B vaccine. The immunizations are to be given as soon as possible within 12 hours of birth and are nearly 100% effective in preventing infection in high risk infants. If the mother is not tested prior to delivery, testing is more costly and may result in delay in immunizing the infant.

Reporting positive hepatitis B surface antigen tests in pregnant women within 5 business days to local or state health departments is required by Kentucky's reportable disease regulation, 902 KAR 2:020. For hepatitis B vaccine-related questions contact Rhenda Mills, RN, at 502-564-4478 or Clarkson Palmer, MD, MPH at 502-564-3261. Questions relating to clinical and/or surveillance issues may be directed to Barbara E. Sonnen, RN, at 502-564-3418, or Peggy Wright, RN, at 502-564-3261 or Ms. Mills.

REFERENCE

1 CDC. Hepatitis B virus: a comprehensive strategy for eliminating transmission in the United States through universal childhood vaccination: recommendations of the Immunization Practices Advisory Committee (ACIP). MMWR 1991; 40 (No. RR-13): 2.

General Assembly Changes Tuberculosis Skin Test Requirements

The state legislature amended the Kentucky Revised Statute, KRS 214.034-*Immunization of Children - Testing and treatment of children for tuberculosis* (*TB*), **effective July 15, 1998. The amendment deleted the requirement that children be tested for tuberculosis. Also deleted is the requirement that each child entering public schools have proof of having been tested for tuberculosis prior to enrollment.** This amendment brings Kentucky's skin testing policy into alignment with recommendations of the American Academy of Pediatrics and the American Thoracic Society that discourage TB skin testing of low risk populations. The 1997 rate of TB in Kentucky (5.1 per 100,000) is below the national average of 7.4 cases per 100,000 population.

The amendment to KRS 214.034 does provide that **in areas where an increased risk of infection exists, a local health department may, with approval of the Department for Public Health, require all first-time enrollees in a public or private school within the health department's jurisdiction to be tested for TB prior to entering school.** It further provides for an exemption on religious grounds from TB skin testing unless there is a suspected case of tuberculosis.

Because of the changes to KRS 214.034, KRS 158.037-*Report of tuberculin skin tests and immunization results,* was also amended to delete the requirement that public and private elementary or secondary schools report TB skin test results to local health departments.

Kentucky Administrative Regulation 902 KAR 2:090. *Tuberculosis detection, prevention and control,* will be amended to reflect the revisions in both KRS 214.034 and KRS 158.037.

LaCrosse Encephalitis in Kentucky

LaCrosse encephalitis (LAC) is an acute inflammatory viral disease involving parts of the brain, spinal cord, and meninges.[1] Children under 15 years of age are at the highest risk. Most infections are asymptomatic. Mild infection manifests as a fever and headache. Severe infections are marked by acute onset and may include headache, high fever, stiff neck, nausea, vomiting, stupor, disorientation, and occasionally, convulsions or paralysis. The case fatality ratio is <1%, but there can be residual neurologic effects. Diagnosis is made by demonstrating specific IgM in serum or cerebral spinal fluid (CSF) or a fourfold or greater change in serum antibody titers. There is no specific treatment.[1,2]

Historically, most cases of LAC occurred in the Upper Midwest and Great Lakes states, however, in the 1990's, large increases in the number of cases have been reported from mid-Atlantic and southeastern states. West Virginia currently leads the nation in the number of LAC cases reported each year. The Centers for Disease Control and Prevention (CDC) received an annual average of 72 cases (median 65, range 29-160) of LAC reported during the 1964-1996 period. In 1997, 109 cases of LAC were reported to CDC, including 3 confirmed cases from the same county in eastern Kentucky.[3] These were the first Kentucky cases of any human arbovirus encephalitis in the 1990's, except for 1994 when 1 case was reported from an eastern county.

Transmission of the virus is from the treehole mosquito (*Aedes triseriatus*). Chipmunks and squirrels are reservoir hosts for the virus. The virus can survive the winter in mosquitoes and/or their eggs. The treehole mosquito lays its eggs in tree holes and artificial containers such as tires and buckets or other sources of standing water. These conditions are the source of increased risk for children who are outdoors in woodland habitats or areas with standing water. Because no vaccine exists, preventive measures include: eliminating standing water or spraying to control mosquitoes; screening windows and doors; using mosquito repellents; and, avoiding outdoor activity at dusk and dawn (peak feeding times for *Aedes triseriatus*).[2,4]

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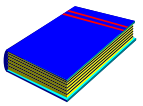
Public Health Improvement Plan Now Available

Individual Kentuckians may have had experience with one part of the public health system and may think that "their" part is the whole of public health. One person may know public health to be immunizations for school children, while another thinks of inspection of milk producers, and a third person considers public health to be health education brochures on diabetes prevention. But public health is all of these things and more.

Citizens of the Commonwealth were seeking a document that would increase the understanding of public health in Kentucky: what it can be and what it needs to become. More that 2,500 Kentuckians were involved in discussions on public health during the past 16 months. These questions were the cornerstones in the quest for a clear focus for Kentucky public health:

- **What does public health mean to the people of Kentucky in 1997?**
- **What constitutes a good health department: at the local level? at the state level?**
- **What should a health department be doing in 1998? 1999? 2000? 2005?**
- **How do we measure success?**

Publication notice . .



To obtain copies of the *Kentucky Public Health Improvement Plan,* contact Sharon Stumbo, Deputy Commissioner of Public Health 275 East Main Street, Frankfort, Kentucky 40621-0001 or call 502-564-3970.

A planning committee including Department for Public Health staff, led by Deputy Commissioner Sharon Stumbo, used these questions to find some answers. The product of their search, the Kentucky Public Health Improvement Plan (KYPHIP), is now available. During their work on this project, staff collected and analyzed data, conducted more than 300 one-on-one interviews with public and private stakeholders, held a Governor's Conference on the Future of Public Health, and presented a draft document at public forums around the state.

The KYPHIP will be reviewed periodically by stakeholders, public health professionals, and government officials to assess

School Immunization - Reminder

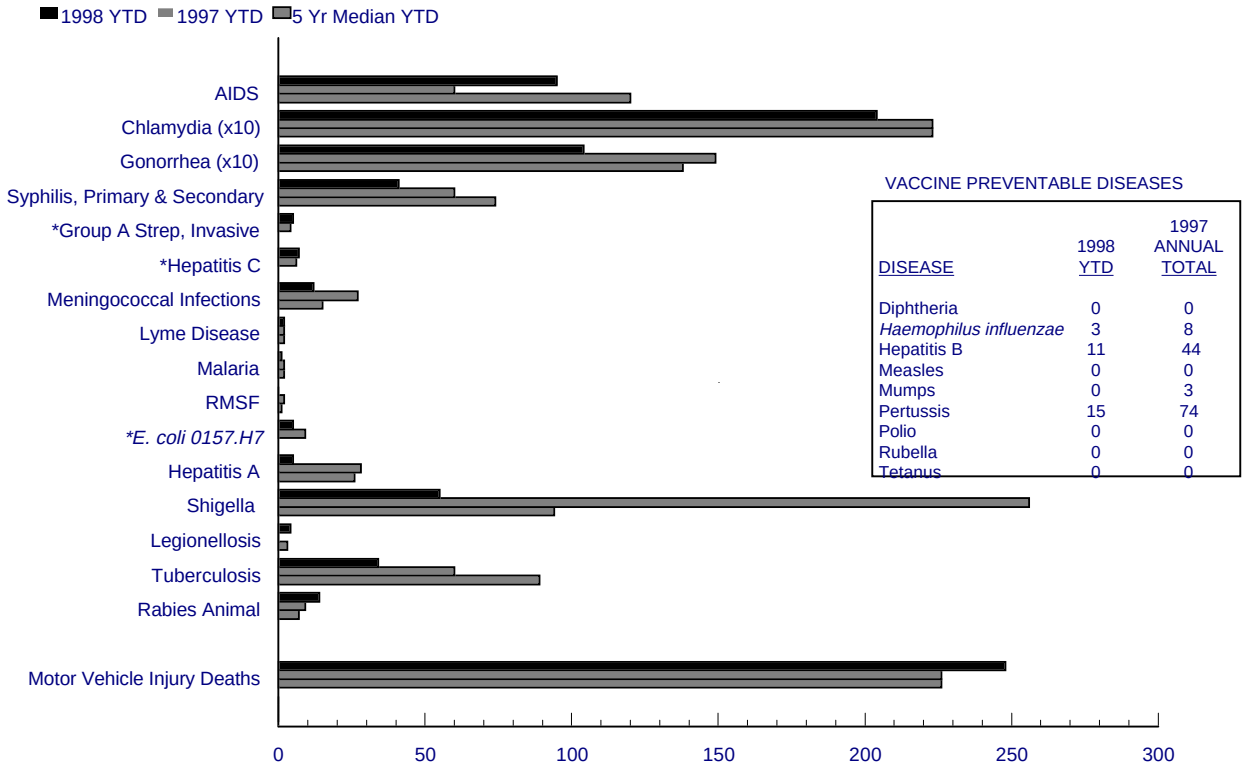
As one school year ends, it is time to be preparing children for entering classes next fall. The immunization regulation changes of January 15, 1997 affect young people who will begin kindergarten in 1998 as well as those younger than 5 years of age who are enrolled in child care programs.

Children born on or after October 1, 1990 who are entering kindergarten are required to have 2 doses of measles-containing vaccine. MMR is preferred for the second dose but is **required** for the first one. The 2-dose requirement of measles-containing vaccine remains in effect for 6th grade entry. The requirements for DTP and polio immunizations remain unchanged for the school-age population. Children under 5 who attend day care centers, certified family child care homes, other licensed facilities that care for children, and preschool programs are to have the *Haemophilus influenzae* type B (Hib) vaccine.

For the 1998-99 school year, students born on or after October 1, 1992 are required to have 3 doses of hepatitis B vaccine at kindergarten entry.

Contact the Kentucky Immunization Program staff if you have questions regarding immunizations for school children at 502-564-4478 or e-mail to Rhenda K. Mills, RN, Nurse Consultant, at rkmills@mail.state.ky.us.

CASES OF SELECTED REPORTABLE DISEASES IN KENTUCKY, YEAR TO DATE (YTD) THROUGH APRIL 1998



VACCINE PREVENTABLE DISEASES

DISEASE	1998 YTD	1997 ANNUAL TOTAL
Diphtheria	0	0
Haemophilus influenzae	3	8
Hepatitis B	11	44
Measles	0	0
Mumps	0	3
Pertussis	15	74
Polio	0	0
Rubella	0	0
Tetanus	0	0

*Historical data are not available.
Disease numbers reflect only those cases which meet the CDC surveillance definition.
Contributed by: Patricia Beeler, Surveillance & Investigations Branch

Note: Report to your local health department.
For weekends, holidays, and emergency calls, please contact the Kentucky Department for Public Health at 502-564-4679.

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LaCrosse Encephalitis in Kentucky - **(continued from page 3)**

All the states bordering Kentucky have reported LAC in the 1990's.[5-10] Kentucky reported only 1 case in this decade until 1997. It is suspected that LAC has existed here for some time, but routine surveillance has not detected any cases. Most cases of encephalitis are not classified by causative agent once they are determined to be nonbacterial in origin.

Accurate surveillance is important in Kentucky to determine the need for mosquito control and to provide public education on avoiding exposure to the treehole mosquito. LaCrosse encephalitis virus is the only virus in the California group of arboviruses suspected to be endemic. Most commercial laboratories in this area screen serum for California Group antibodies; however, specific detection of LAC is necessary and can be done by CDC labs. Plans are being developed for specific LAC testing in the Department for Public Health, Division of Laboratory Services. If you need confirmation of a serum or CSF sample for LAC, or have questions about surveillance of LAC in Kentucky, please contact Michael Auslander, DVM, MSPH, at e-mail mausland@mail.state.ky.us or 502-564-3418.

References available on request.

Upcoming

Immunization training via satellite

Immunization Training

by William L. Atkinson, MD, MPH

- Thursday, June 4: Adult Immunization: Technical Issues (2.5 hrs)
- Thursday, Sept. 10: Immunization Update (2.5 hrs)
- Thursday, Oct. 8: Adult Immunization: Strategies that Work (2.5 hrs)